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Sherman Oaks, CA 91403
February 13, 2014

Subject: Alternative Methods of Transportation Analysis per SB 743

Dear Office of Planning and Research:

Below are my comments regarding possible alternative methods in lieu of Level of Service (LOS) when analyzing development impacts per SB 743. I have two sets of comments. The first pertains to when to apply the alternative measures and the other with the possible alternative methods themselves.

When to Apply the Alternative Methods

After reading the SB 743, I believe that the application of alternative measures is only for statutory defined infill projects falling within an "A High Quality Transit Corridor or Transit Stop." But if the application is applied to every development site within a high quality transit corridor or transit stop, this is going to be very problematic.

Currently, State Statute defines a high quality transit corridor with a bus route with 15 minute frequency or better during the commute periods. Then it defines a major transit stop as either an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute period. The major transit stop has to be either existing or planned to be completed within the planning horizon in adopted Transportation Improvement Program.

There many problems with this definition. First, the frequency of transit line can be narrowed or widen at any time. This is especially true for bus service. So in one year, the bus service could be 15 minutes, then another it could be 20 minutes. For the most part, frequent transit service is based on demand. What is to guarantee that bus service for given corridor will always be 15 minutes or better?

Second is the use of peak commute hours rather than taking into consideration all trips and fact that definition of peak commute hours is not defined. This is a big problem. Traditionally planners and policy makers assume that the majority of the trips and subsequent congestion occur during the "am rush" and "pm rush" periods and mainly due to commuting. The Los Angeles County Metropolitan Transportation Travel Demand Model assumes this to be 6 – 9 am in the morning and 3 – 7 pm in the evening. Meanwhile City of Los Angeles Department of Transportation assumes 7 – 9 am in the morning and 4 – 6 or 4 – 7 in the evening. When looking at the distribution of weekday commute trips for the SCAG region, this agrees with the Travel Demand Model.

But when looking at all trips (Figure 2), this shows that is almost as much trip making during the traditionally defined peaked period. In fact there are more trips being made for the 2 – 3 pm hour slice

than any other except between 7 – 8 am. Then the 6 – 7 am time slice is actually less than any of the midday time slices. So if only the traditional commute peak periods are considered, then this will leave out the midday period which also has very heavy trip making. This is evident in places like Hollywood and Santa Monica and on traffic arteries such as US 101 and I-10 Freeways in Los Angeles where they are congested throughout the day on a daily basis. Situations similar this exist throughout the State.

Third is being within ½ mile of a 15 minute transit line during the “peak commute” period really constitute high priority transit service? According to the Transit Capacity Manual issued by the Transportation Research Board, service needs to be 10 minutes or better. At this level, patrons do not need to consult the schedules and the wait is not long if they miss a bus or train. But this is not the case if it is 15 minutes. Then what about service outside the commute hours? Even if one has good service during the “commute” hours, they still need decent service during the rest of day in order to take care of their other trips. Commute trips are only about 17% of all trips according to latest completed Travel Household Survey for the SCAG Region. If we are trying to create an environment where people do not need to depend on using the car, then this is important especially for choice users.

Fourth, is being within ½ mile of a major transit stop or bus line. This makes sense if this is an urban rail or BRT station, but it doesn't for a standard stand-alone bus stop or bus line. Typically, people on average are only willing to walk ¼ mile to bus and is what is used by FTA and the regional travel demand models throughout the country including San Francisco and Los Angeles. Plus, the criteria should be based only on where the stops are as oppose to simply stating a distance from the transit line itself since people cannot access the gaps of a transit line between stops.

Summary

I believe that the application of using the alternative methods per AB 743 is just for measure impacts of urban infill areas within high priority transit service areas. If the application is applied to all sites within high priority transit service areas, then this will prove to be very problematic for the reasons mentioned above. If it is still desirable to do this, then it would be advisable to use different parameters like for example being within ¼ mile of a bus stop being served by transit service being at least 10 minutes during pm peak and 15 minutes during midday.

Figure 1

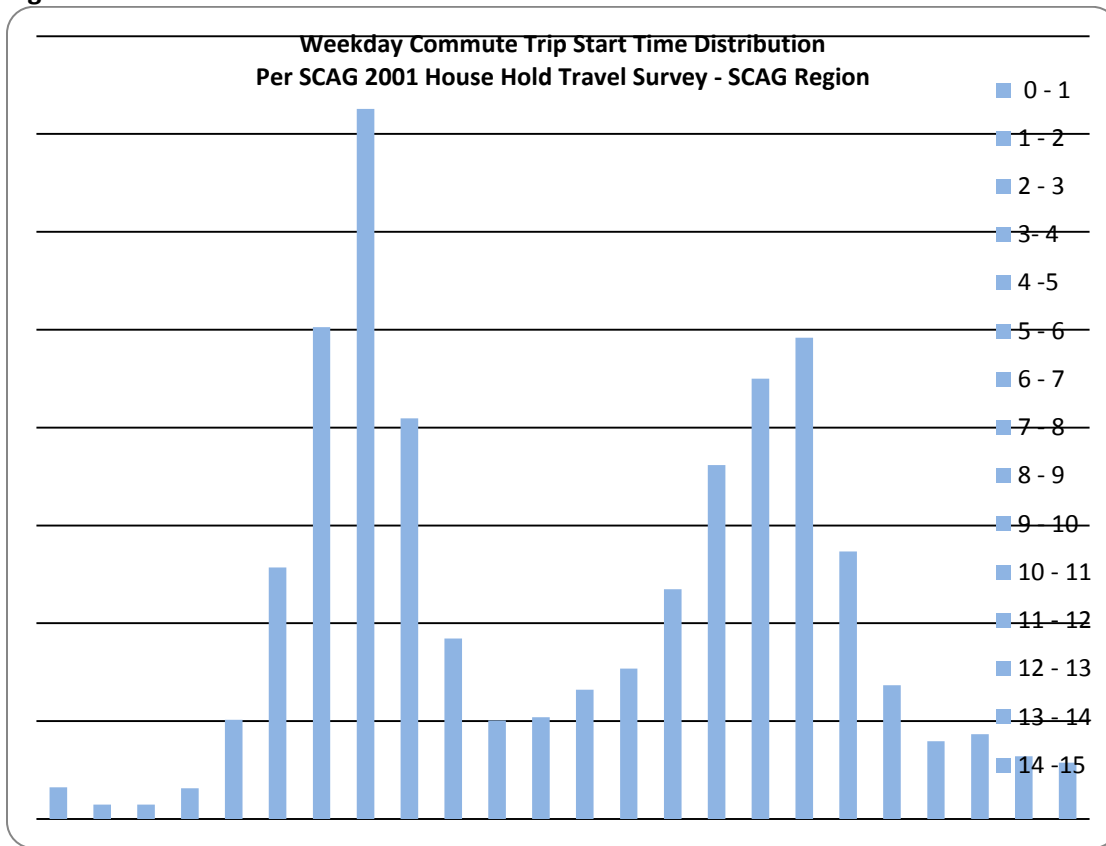
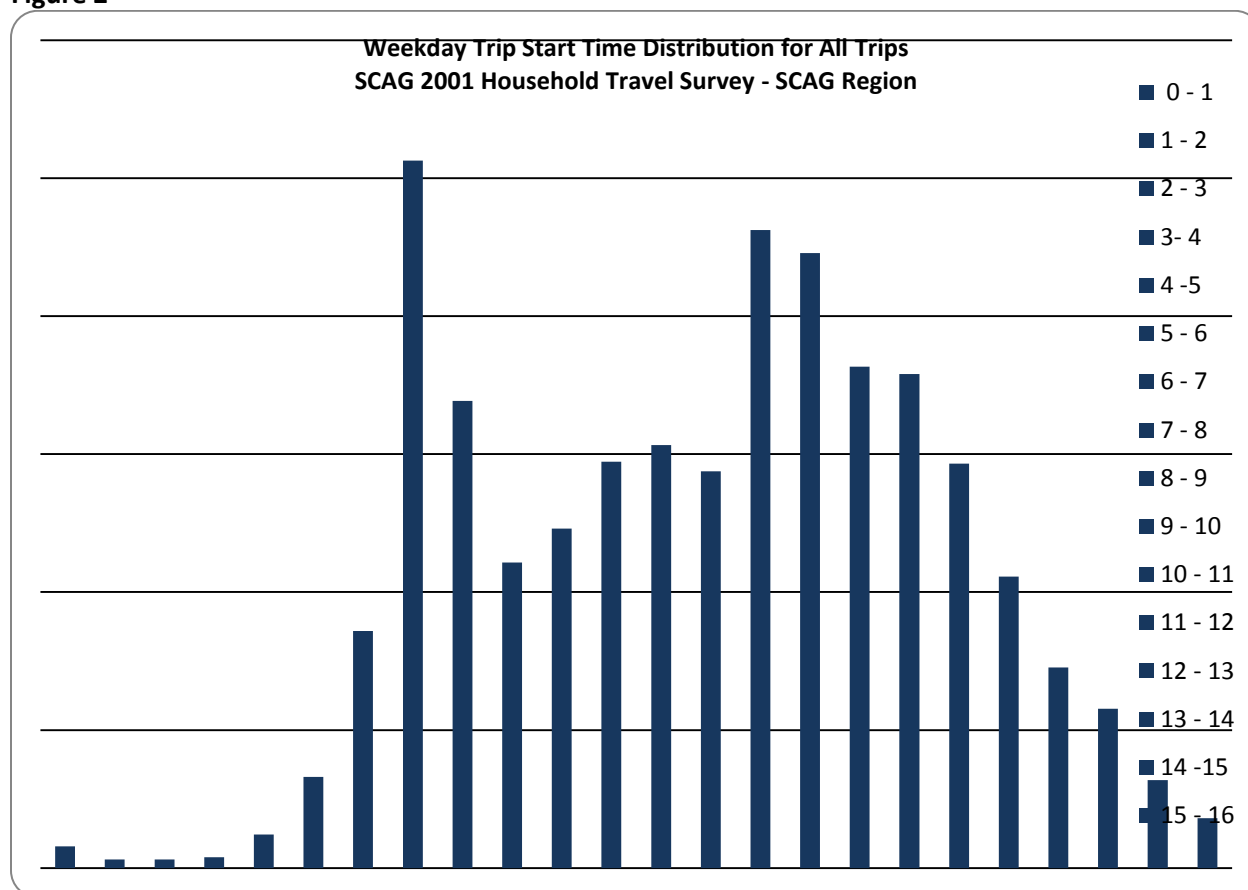


Figure 2



Potential Alternatives to Using LOS

Vehicle Miles Traveled (VMT)

VMT is potentially a good measure for identifying potential development impacts with respect to motor vehicle trip generation. It encompasses not only the number of trips being generated but also length of the trip. VMT the primary variable that Air Quality Models use for estimated potential emission impacts for various development and transportation projects. However estimating VMT is not as simple as your Memo suggests. The sample EPA MXD model that the Memo cites is heavily depended on the regional travel demand model for trip purpose splits and average trip lengths which is not site specific in nature. Furthermore, the model documentation indicates that their model is not validated. Any model used to do the calculations should use local surveys and data as much as possible and be validated to local conditions. Otherwise the results will not be very meaningful.

Automobile Trips Generated

It is measure is okay, but it not as good as VMT since this measure does not indicate direction and duration of the trips being made. So this measure is not as a good as the VMT measure.

Multi-Modal Level of Service

The use of this measure requires strong local knowledge of transit, bicycle and walking impacts. Trip generation for non-motor vehicle modes have not been studied enough. Also there is the tendency for some analysts to want to create a single overall LOS measure across all modes which is very problematic. If such a measure is used, LOS for each mode should be kept mode specific. Also more should be done to quantify and understand non-motor vehicle trip generation.

Fuel Use

This is a poor metric. Fuel consumption varies a lot between vehicles. Older vehicles will consume more fuel than newer ones; larger vehicles will consume more than smaller ones and vehicles such as hybrids will consume less fuel than those using conventional gas and diesel power engines. Then those relying on electric batteries need to obtain their power from the electrical grid where much of it comes from coal fired power stations, big producers of greenhouse gases. So this measure should not be used.

Motor Vehicle Hours Traveled (VHT)

This measure is very similar to VMT and theoretically a good metric to use. But unlike VMT, VHT is heavily dependent on knowing the travel times for each trip. Unfortunately, I don't believe anyone has figured out a simple way of estimating this. Usually the only source for this information comes from the travel demand model and times for individual trips and paths are notoriously not very accurate.

Presumption of Less Than Significant Transportation Impact Based on Location

This measure is highly subjective and be problematic if someone tries to sue over the findings of the analysis.

Recommendation

Initially, VMT is the best alternative in lieu of using Level of Service providing that the analysis tool is validated and utilizes local data surveys as much as possible.

Sincerely,

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